**National Aeronautics and
Space Administration**

**John F. Kennedy Space Center
Kennedy Space Center, Florida 32955**

GETTING STARTED
with KDDMS 10.1

Home
Home displays information specific to you - your assignments, checked-out work, subscriptions, and more. You can customize your Home page to show the information that you are interested in.

Breadcrumb Trail
Breadcrumbs allow you to see where your object is located in the system. You can click on breadcrumbs to quickly navigate to these locations.

Simple Search
This search option is always available and allows you to quickly search upon only the object types you specify.

Advanced Search Tab
Most of the time, Simple Search will be enough. Use Advanced Search when you need more power. Your Search history and Saved searches are also available on the Search tab.

Help
You can revisit this page and get more detailed information in the Help menu under Quick Links.

Customize
Some pages can be customized to display only the content you want to see.

Browse Tab
When you want to look through the information stored in the system, use the Browse tab. The Recent Contexts option allows you to see places that you have visited recently.

Navigator (Opened)
The Navigator slides on and off the page, so it only takes up space when you actually need it. Click the Navigator to reopen it.

Navigator (Closed)
Here is what the Navigator looks like when closed. You can click the Navigator to reopen it.

Table of Contents

1.1 Introduction

The purpose of this document is to familiarize the user with the **KDDMS** system (KSC Design Data Management System.)

1.1.1 Common Terms and Abbreviations

For the purposes of this document, the following terms and abbreviations will be used...

- **KDDMS** — commonly referred to as KSC KDDMS 10.1, Windchill 10.1.
- **Creo** — commonly referred to as ProE, Creo Parametric and Pro/ENGINEER.
- **Creo View** — commonly referred to as ProductView.
- **PTC** — Parametric Technology Corporation.
- **Windchill** — a PDM/PLM application from Parametric Technology Corporation.

1.2 Introduction to KDDMS

In this Section we will cover…

Target Audience

Assumptions and Prerequisites

What is KDDMS?

1.2.1 Target Audience

- The Target Audience for this document is…
  - Someone who will access the KDDMS system, and needs to be able to interact with the KDDMS (Windchill) Product environment as a Team Member.
  - Anyone requesting a new KDDMS user account.
- This course is a required prerequisite for receiving KDDMS login credentials.

1.2.2 Assumptions and Prerequisites

- You may have prior experience with earlier versions or Windchill, but little or no KDDMS (Windchill version 10.1) experience.
  - Users may have extensive Windchill experience; however the user interface in KDDMS 10.1 is sufficiently different, thereby this course is a prerequisite for obtaining a KDDMS 10.1 user account.
  - Existing KDDMS 9.1 user accounts **are** automatically transferred into KDDMS 10.1.

- It is assumed you have applied for a **KDDMS** account…

  - All users who do not already have access to KDDMS 9.1 will need to request an account for KDDMS 10.1.

  - For more details, see the "*How to Request a KDDMS Account*" section that follows.

- You have been identified (or will be) as a Team Member on a Product within KDDMS. As such you will need to know how to navigate within the Windchill interface, including…

  - Navigating Folders and Sub-Folders.

  - Creation, Check-In, Check-Out and Modification of Office Documents.

  - Creation, Check-In, Check-Out and Modification of Creo CAD Documents.

  - It is important to note that the sequences shown in this document are likely **not** the only way to get things done — they are just **one** way to present the material in hopes that it makes sense to the KDDMS User.

1.2.3 What is KDDMS?

- **KDDMS** is the 10.1 **Production Windchill** instance at KSC.

  - **Note**: The KDDMS 9.1 system was recently upgraded to version 10.1

  - For the purpose of this document, and moving forward, the expression "KDDMS" refers to the **upgraded** 10.1 system.

- Loosely translated...

  - KDDMS (Windchill) is a [Browser-based] Product Data/Lifecycle Management system, providing control of Physical data (CAD Models, Drawings, etc. — including end-to-end Versioning, History, Iteration, Revisions, Where-Used, Search, Reporting, Notifications, and much more...) and related associated content (Engineering data, Office and Reference documents, and more.)

  - KDDMS (Windchill) provides control for Business data (Configuration Management, Routing, Releasing, Lifecycle managed objects, Product Structure, Business Objects, Change Management, Bills of Material, and so on.)

  - KDDMS (Windchill) provides several Access Control methodologies to control Who has access to What (*and When*), as well as a rich set of Member-, Group-, and Role-based controls for managing the Team of Users working on various Products.

1.3 Access to KDDMS

In this Section we will cover…

Requesting a KDDMS 10.1 Account

Logging on to KDDMS

Understanding the Windchill User Interface

Using the Home Page

Using Quick Links

Using the Navigator

1.3.1 Requesting a KDDMS 10.1 Account

- Users can request a KDDMS account by going to the *KSC KDDMS Information & Publications* website — **http://kscddms.ksc.nasa.gov/index.html** — following the instructions provided there.

Reference: KTI-2717 Rev E:

Credentials:
Need KDDMS access? Forgot your password? Need changes?

+**NOTE**+ **Windows-7** Users, your request may open **blank** — if so, use the Word Template 🔲 provided to the right of each link.

+ Request a KDDMS Account — (KTI-2717) — Learn More
+ KDDMS Password Reset — or Win7: 🔲 *
+ Request KDDMS Account Changes — or Win7: 🔲 *
+ Development System Account Activity — or Win7: 🔲 *
+ Request for PTC Support/Training Account — or Win7: 🔲 *

1.3.2 Logging On to KDDMS

- The information in this section will be used after you receive your KDDMS credentials (after you have completed this training.)

- To log on to KDDMS, open a Web browser and enter the URL for KDDMS. There are a couple of ways to do this —

    - **http://kddms.ndc.nasa.gov/Windchill** (the "W" must be in caps.)

    - or just enter either **KDDMS** or **kddms.**
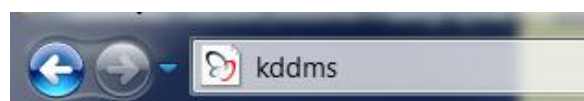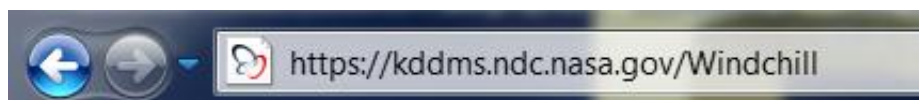
- When the KDDMS Splash Screen and Login window appears, type in your KDDMS credentials (User name and Password.) If KDDMS recognizes your credentials, you will be logged on to the system and your KDDMS Home page is presented.
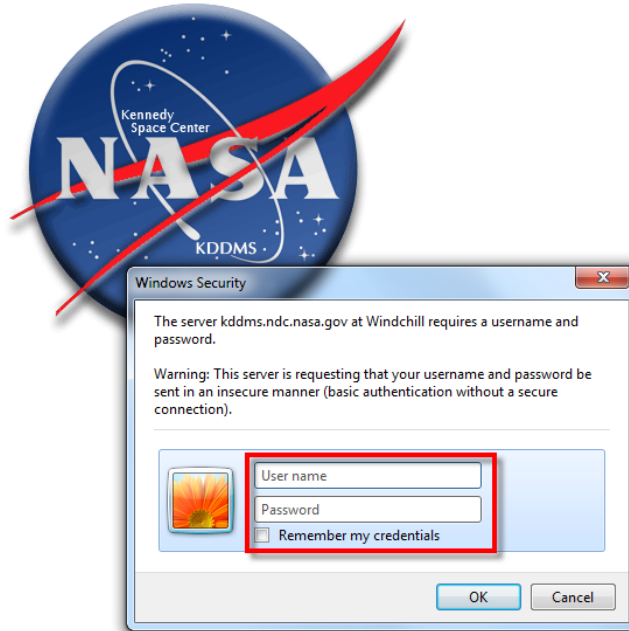
- **Firefox** is the preferred Web browser to use, but Chrome and Internet Explorer are alternatives.

- You will **not** be able to complete your login until your KDDMS account has been created.

- Your KDDMS account credentials are exclusive to KDDMS (for example, your NDC username/password will **not** work in KDDMS.)

1.3.2.1 My Logon was Successful — How do I Logout of KDDMS?

- A question that commonly comes up is, "*How do I logout of KDDMS?*"

  - **There is no logout function**. Closing the browser is the only way to completely log you out.

    - **All** browser windows/tabs must be closed in order to be completely logged out of KDDMS.

## 1.3.3 Understanding the Windchill User Interface

- The Windchill interface is composed of three main sections; the **Header**, **Page**, and **Navigator**.
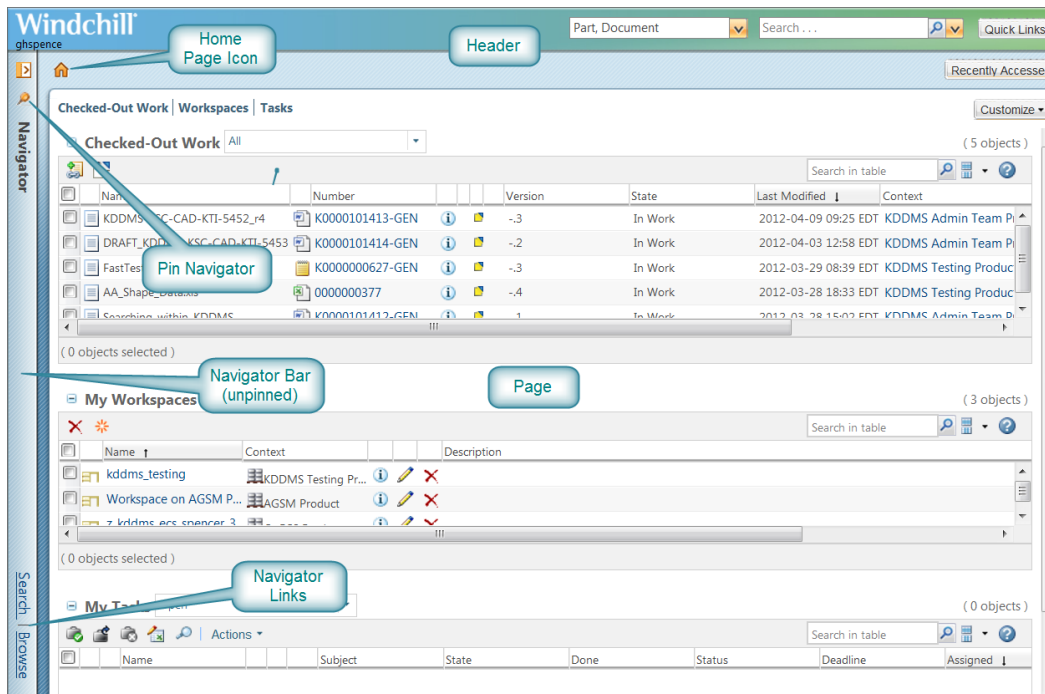
- The **Header** area contains the ability to perform a simple search, and a series of useful tools available from the Quick Links drop-down menu.

- The **Page** area displays information in various tables and provides navigation and page customization tools.

- The **Navigator** area provides access to advanced search utilities and the ability to browse contexts (Products/Projects/Libraries) to which you have access.

## 1.3.4 Using the Home Page

- Each time you login to KDDMS, you will be taken to your Home page.

  - You can also access your Home page at any time by clicking the Home icon from the upper-left corner of the page or in the upper-right corner of the Navigator panel.

  - The Home page displays a series of tables that provide information specific to you.

  - If the tables extend beyond the visible portion of the page, you can use the links at the top of the page to scroll to the desired information.
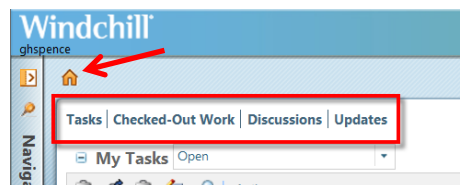
- The following tables can be displayed on the Home page:

  - The **Tasks** table displays and manages all items that are assigned to you.

  - The **Updates** table displays all of the objects that you have recently created or modified.

  - The **Checked-Out Work** table displays all of the objects that you currently have checked out.

  - The **Packages** table displays all of the packages to which you have access.

  - The **Workspaces** table displays all of your workspaces.

  - The **Meetings** table displays your meetings.

  - The **Notebook** table displays links and files related to your work.

  - The **Subscriptions** table lists objects to which you subscribe for event notifications.

  - The **Reports** table displays the reports available to run and the report results.

  - The **Discussions** table displays discussion topics you have created or have been added to.

☞ The system default for the Home page is to have the My Tasks (previously called Assignments), Updates, and Checked-Out Work tables displayed.
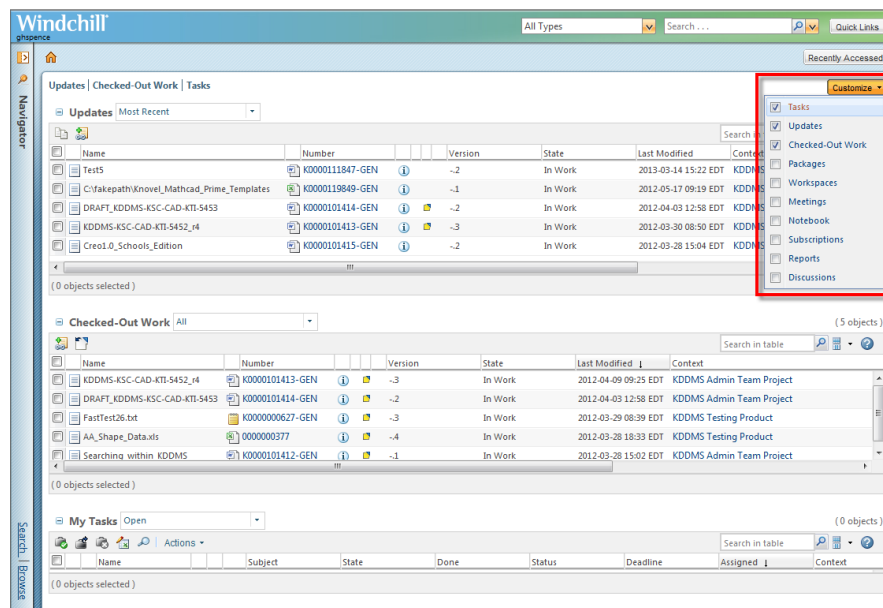

- The Customize menu in the upper-right corner of the Home page enables you to add or remove tables from the page.

  - Some table options may be greyed out based on preferences set by your administrator.

  - Once you have selected the tables that you want to display on the Home page, you can change the display order by clicking and dragging the table link at the top of the page.
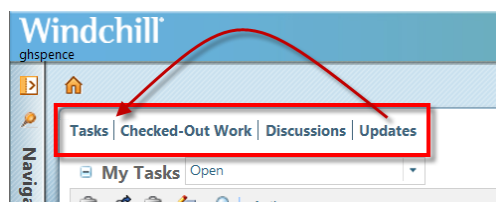
## 1.3.5 Using Quick Links

- The Quick Links drop-down menu enables you to access commonly used tools, preferences, and information.

    - The Quick Links menu is located in the upper-right corner of the User Interface.
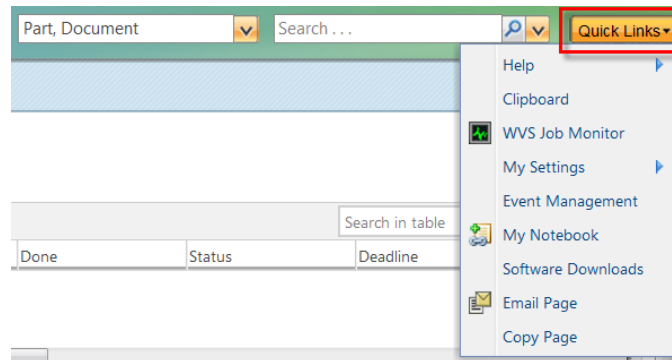
- The Quick Links Menu contains the following…

    - The **Help** menus, which provides access to a variety of Help tools and utilities.

    - The **Clipboard** option enables you to cut, copy, and paste objects and URLs in the system.

    - The **WVS Job Monitor** option opens the WVS Job Monitor page from which you can view the status of Visualization Publish jobs.

    - The **My Settings** menus, from which you can set your Preferences, view and update your Profile, and manage your Calendar.
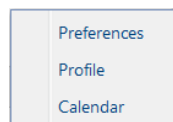

    - The **Event Management** option enables workspace users to view and manage system log messages generated from their authoring or modeling applications.

    - The **My Notebook** option opens the My Notebook table, which displays links and files related to your work.

    - The **Software Downloads** option opens the Software Downloads page, from which you can install supporting and integration software.

    - The **Email Page** option opens the E-mail Page utility, which enables you to send an E-mail referencing the currently viewed page.

    - The **Copy Page** option enables you to copy the current Windchill page to the clipboard.

1.3.5.1 Changing your Password

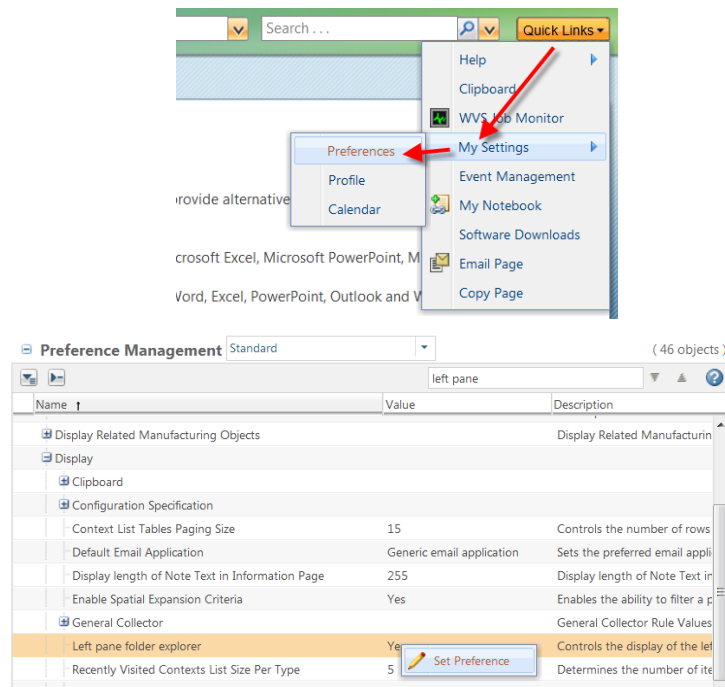Quick Links > My Settings > Profile

- The Profile page shows general information about the currently logged in user and is used for changing your KDDMS Password.

  - Choosing **Edit Password** from the Actions drop-down menu will display the Edit Password window, allowing you to change your password.
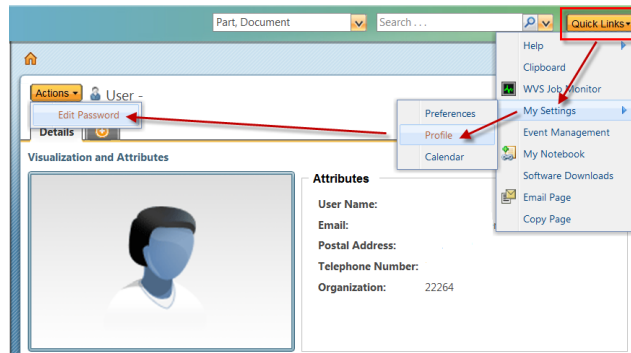
1.3.5.2 Setting Personal Preferences

Quick Links > My Settings > Preferences

- The Preference Management page is employed to set KDDMS operational preferences.

  - KDDMS is configured with default preferences. The **Preference Management** area can be used to customize the settings to a particular user's liking.

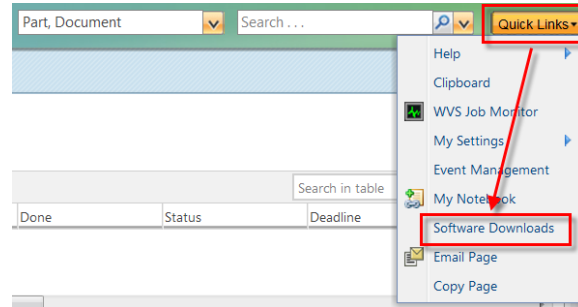Note: Some Preferences are locked by the KDDMS Administrator.

1.3.5.3 Software Downloads

Quick Links > My Settings > Software Downloads

- The Software Downloads page displays additional KDDMS related software available for download.

- Typically, only Creo View and Windchill Desktop Integration will be available for download.

☞ After completing this course, you will receive additional information regarding the downloads that will be available to you.

1.3.6 Using the Navigator

- The Navigator enables you to Search or Browse for information in Windchill.
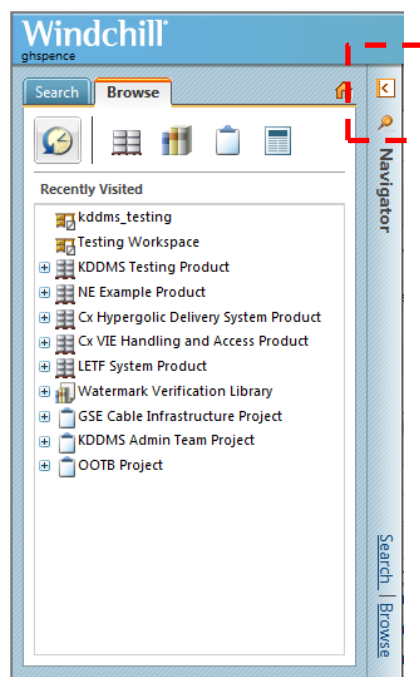
    - The Navigator contains a **Browse** and **Search** tab.
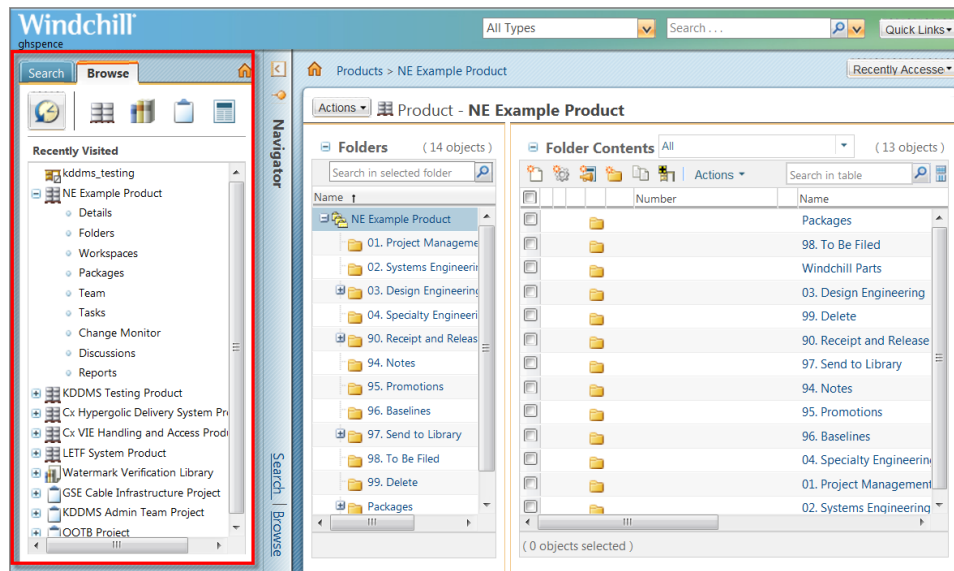
    - The Navigator can be expanded/collapsed and pinned using the Navigator bar icons.
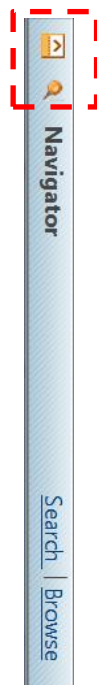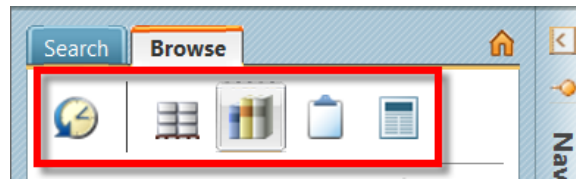

Closed   Opened

1.3.6.1 The Browse Tab

- The Browse Tab contains links to Products, Projects, Libraries and Change tabs

The **Recently Visited** option provides quick access to recently accessed Products, Projects, Libraries.

The **Product** and **Library** options display information about the Products/Libraries to which you have access.

- The **Details** link displays attributes and information about the context.
- The **Folders** link displays the contents of the current context in a folder structure.
- The **Workspaces** link displays all of your workspaces for the current context.
- The **Packages** link displays all of the packages for the context and delivery information for those packages.
- The **Team** link displays all team-related information and actions for the team members of the current context.
- The **Assignments** link displays and manages tasks that are assigned to the context team.
- The **Change Monitor** link displays change information and status for the context.
- The **Discussions** link displays all discussion topics for the current context.
- The **Reports** link displays the reports available to run for the current context and the report results.

The **Project** option displays information about the Projects to which you have access.

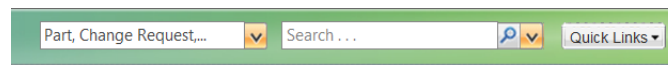The **Changes** option provides status and information about engineering change.

- The **Issues** selection displays all of the problem reports for which you are a team member.
- The **Variances** selection displays all variances for which you are a team member.
- The **Change Requests** selection displays all the change requests for which you are a team member.
- The **Change Notices** selection displays all the change notices for which you are a team member.
- The **Change Monitor** selection displays the Change Monitor page, which enables you to gauge change process status for various contexts.
- The **Reports** selection displays change reports available to run and the report results.
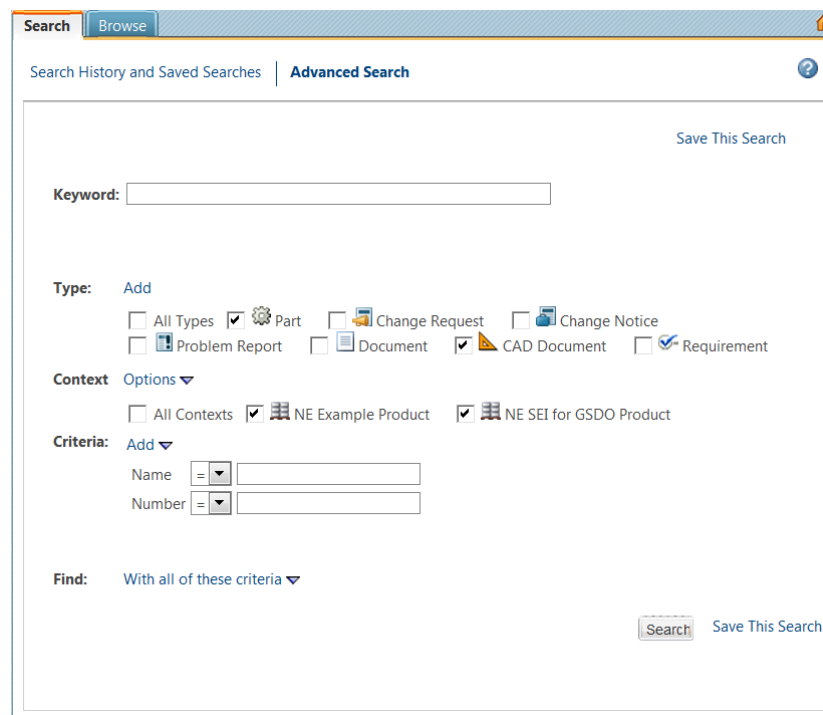
1.3.6.2 The Search Tab

- The Search tab provides access to a Search History list, a Saved Searches list, and the Advanced Search utility.

☞ The Search field located in the Header is a Keyword search. Use the drop-down to select the object type for which you are searching.

- Advanced Searches can be performed…
    - Search Name and/or Number
    - Search by object Type
    - Search by Context

☞ Keyword searches can be performed here as well.

1.4 Products and Libraries

In this Section we will cover…

Primary Storage Contexts

Product Membership

Organization of Products

Teams and Roles

1.4.1 Primary Storage Contexts (Products and Libraries)

- When you create documents, you also dictate where to store them.
    - Typically, this is based on the location in which the document will reside.
    - KDDMS is made up of several individual storage locations, called Contexts.
    - There are three primary storage Contexts in KDDMS – **Products, Projects** and **Libraries**.
    - In this particular document, we will be focusing on **Products**.

1.4.1.1 What are Products and Libraries

- A KDDMS **Product** provides the storage location under which a team of people can create and manage all of the information (data) that is relevant to the design, manufacture, and support of a product.
    - At KSC, **Products** generally represent an individual Subsystem or Program Element.
    - If you plan on Releasing objects in **KDDMS**, they **must** be in a **Product**.
- **Libraries** are more general. If you wanted to create a library of parts that could be shared within multiple Products, you would store them in a Library.
- **Products** and **Libraries** organize their objects within folders.
    - KDDMS utilizes a standardized KSC folder structure, by default.
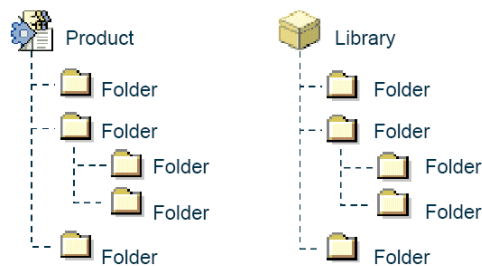   - **Storage Contexts** in KDDMS – Products, Projects and Libraries…

Storage Contexts

- Products
    - Store objects related to one product.
    - Organize objects in folders.
- Libraries
    - Store objects related to one another, but not to one specific product.
    - Organize objects in folders.

1.4.1.2 Products

- A KDDMS **Product** provides the location where a Team of people can create and manage all of the information that is relevant to the design, manufacture and support of the Product.

- **Products** are individualized containers for doing design work. The following, for example, would all be individual **Products** in KDDMS…

  - Hypergolic Delivery Systems

  - Mobile Launcher

  - LETF Systems

- **Products** contain Documents which are organized in folders.

  - CAD Documents (for example, Creo models.)

  - Documents (for example, MS Office, PDF.)

  - Parts, End Items (used to build Product Structure.)

- **Products** have a Team of users who have varying levels of access.

  - Predefined Roles are employed to define the Team (for example - Team Members, Product Managers, Guests.)

1.4.1.3 The Idea of Folder-Based Content

- All documents should live in a Folder/Sub-folders of the Product.

  - At KSC, the desire is to **NOT** create content in the Root (top-level) of a Product.

1.4.2 Product Membership

- Your user account will have Guest (read-only) access to all Products that have been created for public access.

- Membership to a Product is not automatic.

  - You must be added as a Team Member to every Product you are going to be working (create and modify) in.

  - The Product Manager adds people to the Product Team.

1.4.3 Organization of Products

- The **Product** and **Library** options display information about the products to which you have access.
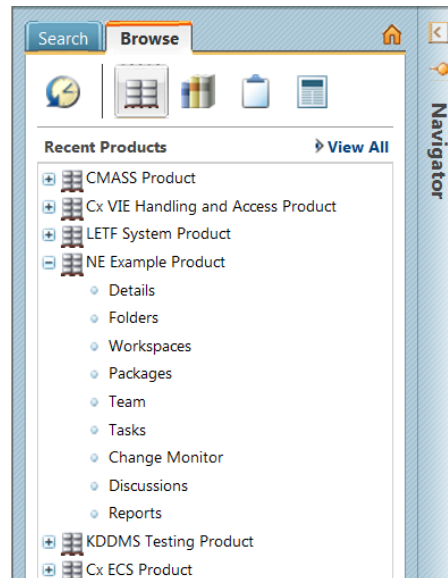
- The **Details** link displays attributes and information about the context.

- The **Folders** link displays the contents of the current context in a folder structure.

- The **Workspaces** link displays all of your workspaces for the current context.

- The **Packages** link displays all of the packages for the context and delivery information for those packages.

- The **Team** link displays all team-related information and actions for the team members of the current context.

- The **Task** link displays and manages tasks are assigned to the Product team.

- The **Change Monitor** link displays change information and status for the context.

- The **Discussions** link displays all discussion topics for the current context.

- The **Reports** link displays the reports available to run for the current context and the report results.

1.4.4 Teams and Roles

- As mentioned previously, Products consist of Team Members in assigned Roles.
    - Roles define who can do what in the Product.
- The main Roles in a KDDMS product are…
    - **Team Members** — Personnel in this role create and modify documents.
    - **Product Managers** are Team Members with the additional responsibility of managing the Team, organizing the Product and other Product Administrator functions.

1.5 Working with Documents

In this section, we will be covering…

What is a Document

Folders in a Product

Getting Information About a Document

Locating a Document

The KSC Lifecycle

Versions and Iterations

Managing Your Work

1.5.1 What is a Document

- Documents, as defined in KDDMS, are objects designed to store any data.
    - A Document can stand alone or can be associated with other document types, for example, Product Structure, or other documents.
- Types of KDDMS Documents:
    - In general, there are three Document Types we will be working with…
    - **Office** Documents (WTDocuments)
    - **Creo CAD** Documents (EPMDocuments)
    - **Product Structure** Documents (WTParts)
    - Office Documents are typical working documents such as MS Word docs, MS Excel docs, PDF's, images and more. They have icons that look like...
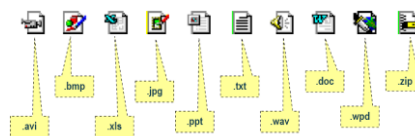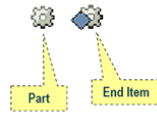

- Creo CAD Documents are used to store engineering design data such as Drawings and Models. They have icons that look like...
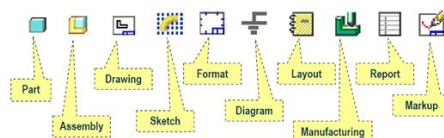
- Product Structure Documents are objects that represent a component of an Assembly in Product Structure (used for example in Bill of Materials, a.k.a. "BOMs".) They have icons that look like….
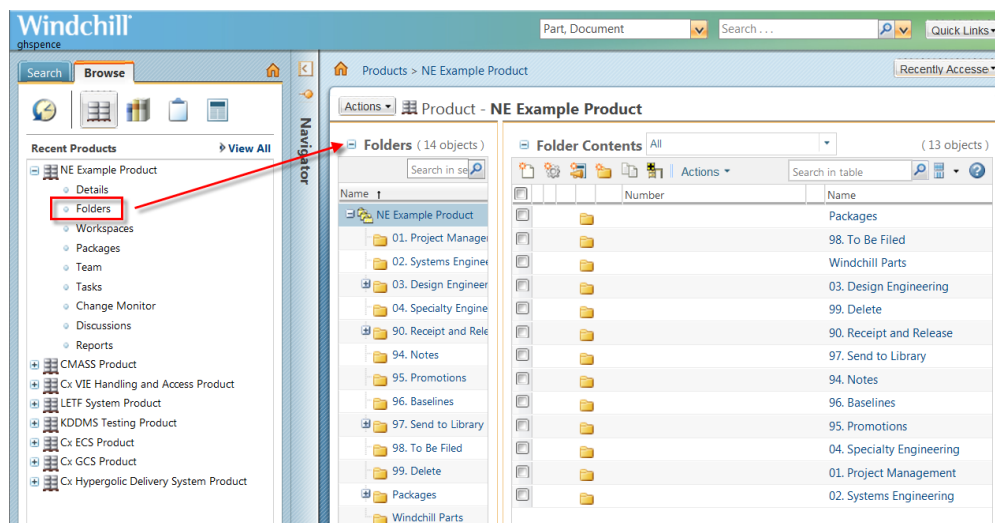
1.5.1.1 Document Type Examples

- A **KDDMS Document** is a content holder for files, URLs, or externally stored content integral to product development, such as specifications, requirements, assembly functions, technical publications, prototypes, and services documents.

- A **CAD Document** is a revision controlled, life cycle-managed object containing a CAD model, which is a file or a set of files containing information in a CAD application format.

  - A **CAD Document** is a content holder for CAD-derived files that can be related to parts in order to further describe the associated part. It can also be related to other CAD documents so that dependencies created and maintained by the authoring CAD system are represented.

- A **Part** is a physical component or assembly used in a product structure. A product structure is a hierarchical representation of all assemblies and component parts necessary to assemble an end item.

- An **End Item** is the top-level assembly that represents a unit of product functionality that is sold, assembled, and delivered to the customer. Additional end items may be created within a product in order to support the concept of product lines and modular products.

- More on these document types later…
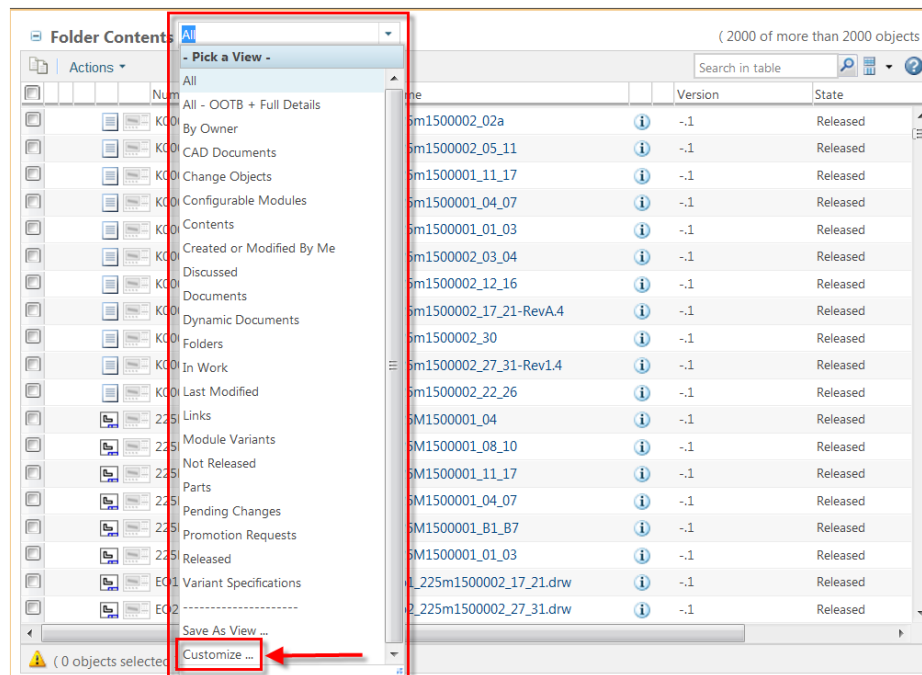
1.5.2 Folders in a Product

- All Documents in KDDMS are maintained in **Folders**.

- The **Folders** minor tab displays the folder structure of the current **Product**.

- The Folder layout in KDDMS takes its origin from Windows Explorer, where the main Folder list is displayed on the left, and the chosen Folder Contents is displayed on the right.

  - All Products utilize a KSC KDDMS standard Folder structure.

- Note the drop-down menu next to the Folder Contents — this drop-down allows us to filter what is displayed in the Folder View…

- The *default* **View** displays **All** Folders and Documents. Other choices can be helpful in presenting (filtering) specific subsets. You can also create your own Customized View…

☞ If your Folder Contents list display is not what you expect to see, it may be that the **View** selection is set to something other than **All**.

1.5.3 Getting Information about a Document

- Each document inside KDDMS has many associated features. The KDDMS default Folder View will give us some of the more important information about these features.

- Documents in Folder View

    - The content of any chosen Folder (the Norm-Tests sub-folder, in the left-hand window below) is displayed in the **Folder Contents** area (right-hand window.)
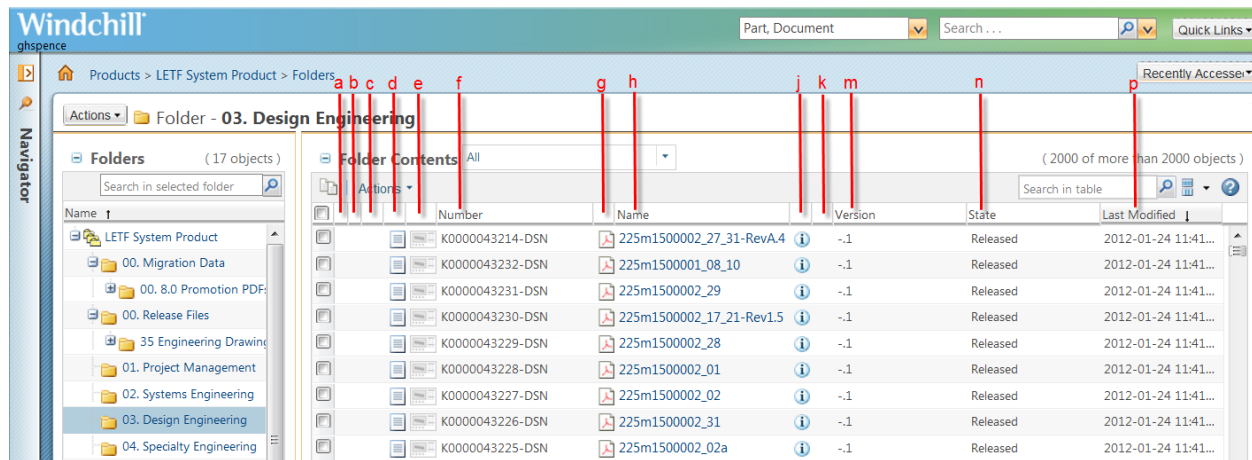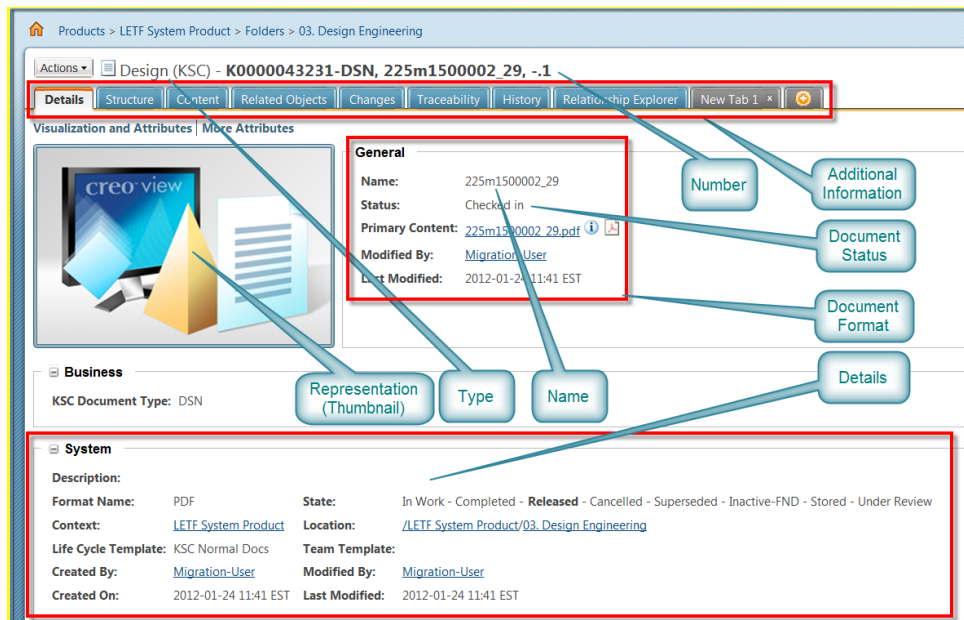

- Columns (left to right, above) are…

    a. General Status – Indicates if the Document is Checked-Out.
       - Document is Checked-Out by **you**.
       - Document is Checked-Out by **someone else**.
    a. Share Status – Displays the object's status relative to a Project.
    b. Change Status – Indicates whether there is a change against the object.
    c. Object Type Indicator – Indicates the Type of the Document.
    d. Thumbnail Navigation – Displays a thumbnail of the object.
    e. Number – The KSC Number of the Document.
    f. Document Format – Displays the format of the object (for example, PDF, Creo Part, Creo Assy).
    g. Name – The Document's name.
    j. View Information – A link to the Document's Details Page.
    k. Discussed – Discussion comments for an object.
    m. Version– Indicates the Version of the Document.
    n. State – Indicates the State of the Document.
    p. Last Modified – Indicates the date the object was last modified.
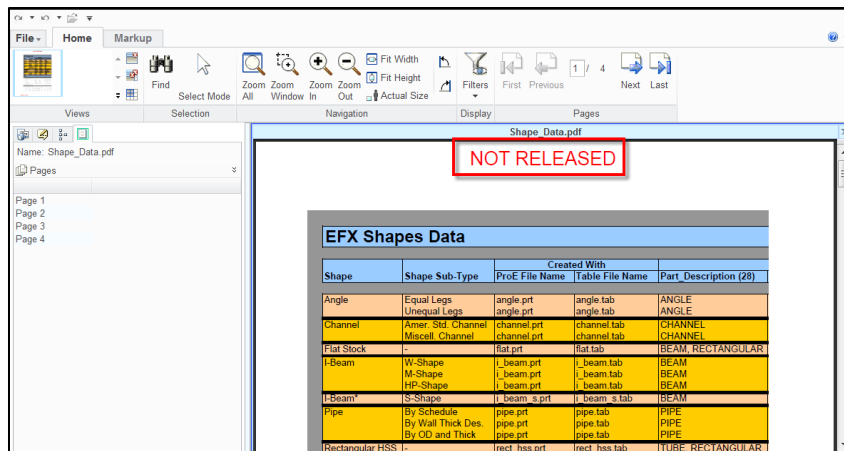
☞ More information to follow on these items.

1.5.3.1 What's available on a Document's Details Page

- The Details page ⓘ shows the details of any given Document in KDDMS — such as Number, File Name, Name, Version, State, Type, Location, History and associated Dates.

1.5.3.2 Viewing a Document in Creo View

- **Creo View** is the "**Official**" viewing tool for all KDDMS Documents. As such, we will learn how to view Documents using Creo View.

  - When viewing or printing Documents from KDDMS, it is important to know the **Release** status of the data being viewed. When viewing Documents using the KDDMS configured ProductView, **Watermarks** are applied.

  - A Watermark is data added to the Document being viewed, based on its Released State. So, for example, if a Document is Not Released, the Watermark will display as such.

☞ **Important** — If a Watermark is not present, then it is **not** an Official KSC Document.
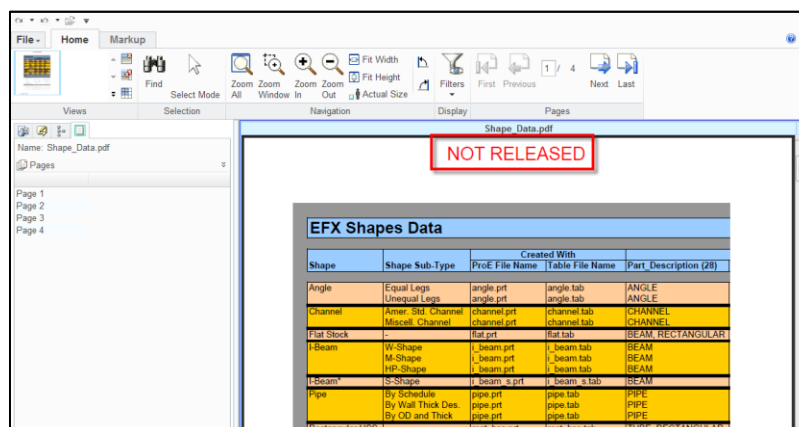
1.5.3.3 To View Documents via Creo View

- There is more than one way to view documents…

- In a folder view, from the Actions menu, select **Open in Creo View**.
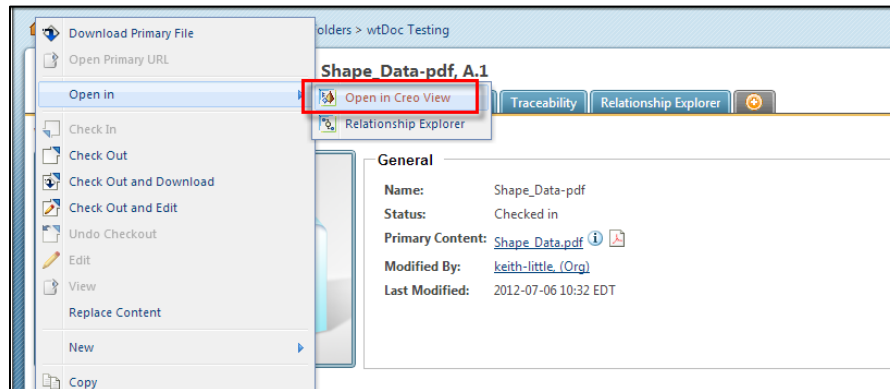
- Alternatively, from a **Details** page ⓘ of the document, simply select the thumbnail image in the upper left-hand corner.

- A separate Creo View window opens…

1.5.4 Locating a Document

1.5.4.1 Browsing

- A document may be found by **browsing** the folder structure of KDDMS. Often times however, searching for a document is faster.

☞ Browsing folders within KDDMS can be time consuming, depending upon the number of documents in the folders. Using the Search functionality is generally the faster method to find documents in KDDMS.

1.5.4.2 Searching

- Searching allows you to find documents in KDDMS by searching on the document's attributes (such as name or number), and possibly, the document's content (such as the text of a document).

    - KDDMS is configured to perform index searches, which allows you to search for information in the database. An index search uses the concept of a collection, which is a group of business information objects (both keyword and attributes).

- In the Navigator, the Search tab provides access to a Search History list, a Saved Searches list, and the Advanced Search utility.

    - The Search field located in the Header is a Keyword search. Use the drop-down to select the object type for which you are searching.

- Select the Advanced Search tab to perform a Name and/or Number search.
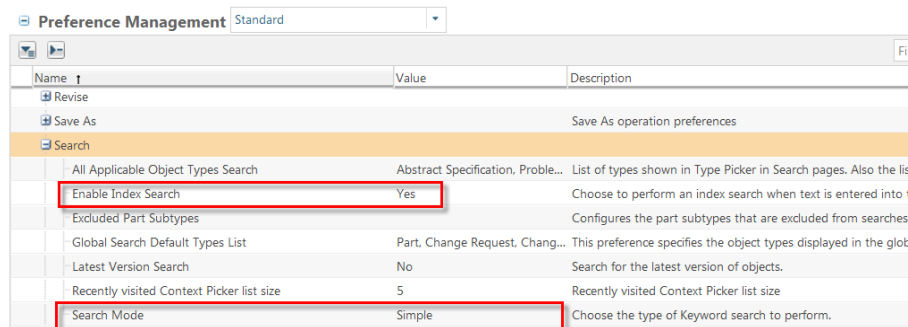

☞ The Asterisk and Question Mark (* and ?) are commonly used wildcard characters and can be very useful in finding documents.

☞ A useful tool for finding information within a folder is to use the Search in table

1.5.4.3 Setting Search Preferences

- In the **Preference Management** table, there is a category specific to search preferences. Within that category, each search preference is named and a short description of the preference is provided. The current value of the preference is also displayed. There are two settings to make note of here...

  - Enable Index Search – Choose to perform an index search when text is entered into the Global Search or Keyword Search fields.

    - Yes/No - The System default is Yes (use Index Search).

  - Search Mode – Simple is the default mode; Advanced allows you to enter more specific search queries using Fast Query Language.

1.5.4.4 Using Wildcards

- Wildcards allow you to modify your search. Without wildcards, search results are limited to the objects that exactly match the words or numbers you enter in the search field.

- Wildcards are useful when you are not certain of the exact name or number of an object or when you need to search for multiple terms that have several similar characters (such as model skel0001, skel0010, skel0005).

  - The most common wildcard, an asterisk (∗), indicates one or more characters can appear in a position. The asterisks indicate the word could be preceded or followed by one or more characters.

    - Examples/Results like the following would be returned:

      - ∗storage∗ — 79k10338_storage

      - ∗storage∗ — 7910338_storage_tank_skel0006

      - ∗storage∗ — 645M0300060, RESTRAINT POLE STORAGE FIXTURE_PAR37238

  - The question mark (**?**) can also be used in all search fields to indicate that one character can appear in that position.

    - Examples/Results like the following would be returned:

      - ∗tank_skel000**?** — 7910338_storage_tank_skel0001

      - ∗tank_skel**????** — 7910338_storage_tank_skel0005

      - ∗tank_skel00**??** — 7910338_storage_tank_skel0099

☞ **Note:** Wildcards cannot be used in place of text. You must include one or more characters with a wildcard in order for the search to be valid.

1.5.4.5 Keyword Search Capabilities & Wildcards

- **Information indexing** — When information is stored in KDDMS, it is indexed word by word, and then becomes searchable using the keyword search mechanism. The keywords are organized and indexed, and are used as the comparison target when you exercise a keyword search.

- The indexing process looks at all the words, including attributes, names, descriptions, text, and the document contents, and identifies each word that is separated by spaces or punctuation as a keyword.

  - For example, all the information you see on a Document or Part Details page is indexed word by word.

- **Keyword searching wildcards** — When you don't know the specific target item you're looking for, a keyword search can save you time in finding information or occurrences of information. Keyword searching includes the use of wildcards like those discussed earlier. Here are a few other notes to keep in mind:

  - Boolean operators (AND, OR, NOT) are also supported, creating a powerful searching tool. This is especially useful in locating information you are not familiar with.

  - Keyword searching is case insensitive.

  - Keyword searching is always combined with the other search criteria fields, so the results of a keyword search can be further screened by type of object, dates, owner, or any other fields in the lower section of the Search page.

1.5.5 The KSC Lifecycle

- A KDDMS **Lifecycle** is a system of **States** associated with each document in KDDMS.

 - A Lifecycle State represents a stage of development, such as In Work, or Released.

- KDDMS allows only a single State to be active for a document at any given time. The KSC defined States are…

  - In Work, Completed, Released, Cancelled, Superseded, Inactive-FND, Stored and Under Review.

  - Primarily, we will be employing the **In-Work** and **Completed** States.

  - More on this later in the Manipulating Documents section…

1.5.6 Versions and Iterations

- All documents in a Product are Version controlled.

    - All documents in KDDMS use MIL-Std versioning.

    - For example, **–.1** > **A.3** > **B.6**, and so on.

- A **Version** is made up of both a **Revision** and **Iteration.** In the example image below, Version **A.1** is made up of Revision **A** and Iteration **1** (*revision.iteration.*)

Revision Iteration

A.1

Version
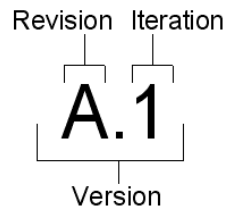
- **Revision** – a Document's major revision is incremented (for example, A.4 to B.1) when the **Revise** Action is applied.

    - The default revision sequence is: **–, A**, **B**, **C**…

- **Iteration** – Mechanism to historically track updates to a document. **Each time** a document is **Checked-In** to KDDMS, its iteration is incremented (for example, A.4 to A.5.)

    - The default iteration sequence being 1, 2, 3…

1.5.7 Managing Your Work

- KDDMS provides tools that can help you manage your work.

1.5.7.1 Manage Tasks

- The My Tasks table provides tools to help you manage tasks for the Contexts you are a member of.
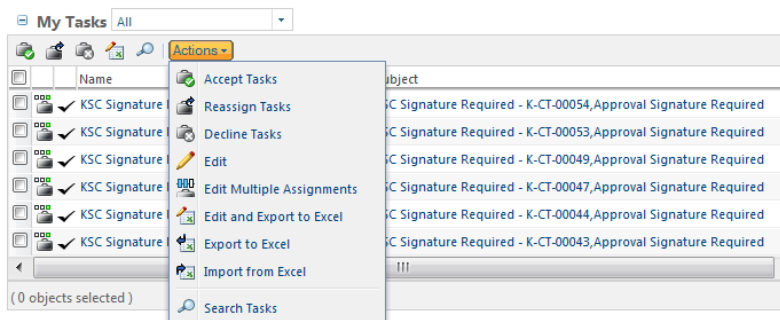
1.5.7.2 Access Recently Modified Objects

- The Updates table enables you to view and sort the objects you have recently created or modified.
    - Enables you to quickly access objects you frequently modify.

1.5.7.3 View Checked-Out Items

- The Checked-Out Work table provides a list of all working copies of objects you have checked-out.

1.5.7.4 Manage Notebook

- The Notebook table enables you to store links to Web Pages and KDDMS objects.

1.5.7.5 Subscriptions

- Users can subscribe to objects, documents, or parts, to notify you of changes to them.
    - You create the actual subscription within the object you are working with, and manage the subscription from your Home page.

1.6 Manipulating Documents

In this section, we will be covering…

Document Basics

Checking-Out a Document

Checking-In a Document

Setting the Document's State

1.6.1 Document Basics

- A document can be manipulated in a number of ways, depending on what is desired…

  - Opening a document just to **look** at it (that is, **not** modifying the document.)

  - Opening a document to get a **copy** of it (while **not** modifying the original document.)

  - Opening the document to make an **authorized change** to it (actually **modifying** the KDDMS document.)

- How does KDDMS manage Documents — an overview…

  - KDDMS is in charge of **managing** our documents. Access is controlled to – who can **read** it, and more importantly, who can **modify** it.

- The next important item is **how** KDDMS handles changes to our documents…

  - The mechanism KDDMS employs for allowing actual **changes** to any document is via **Check-Out** and **Check-In**. What does this mean?

    - KDDMS maintains Iterations of our documents. It does this using the **Check-Out** and **Check-In** process.

    - We **Check-Out** a document so we can work on it.

    - While the document is **Checked-Out**, no one else can make changes to it.

    - After we are finished with our changes, we perform a **Check-In** — at this time a new Iteration of the document is created.

☞ **Checking-In** a document **always** causes its Iteration to increment.

☞ If you **Check-Out** a document by mistake, you can choose the **Undo Check-Out** Action to put it back the way it was. More on this later…
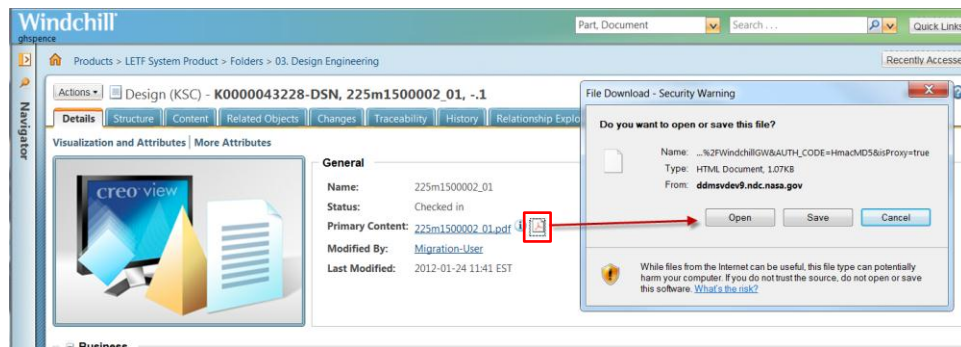
1.6.1.1 Saving a Copy of a Document

- It is possible, from KDDMS, to save a copy of any Office document to your computer's Desktop. To do so, we can select on the object's format icon.

    - From the Folders window, or the Document's Details Page…
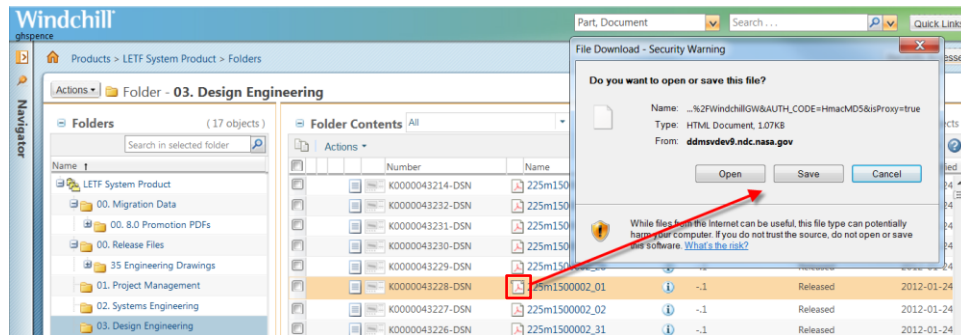
    - …or the Document's Details Page.

    - A **File Download** dialog will be presented, select **Save**.

☞ **Important** — the result of this is a local reference copy. If your need is to **modify** this Document in KDDMS, perform a **Check-Out** of the document first. More on this later…

☞ We don't use the **Open** choice because modifications made in this manner are **not** saved in KDDMS.

1.6.1.2 Creating a New Office Document

- Creating Office documents is a three-step process…

    - First, you must **create** an Office document on your computer and save it somewhere locally to your computer (i.e., your Desktop.)

    - Second, you must identify the document's sub-folder location where the file will reside.

☞ Usually, new documents in KDDMS are created from files you upload from your local computer. There are however, other less commonly used methods — including for example, creating a document from a pre-defined KDDMS Template, or creating a document that has no pre-defined content.

☞ **Important — DO NOT** create documents in the top-level folder of a Product.

- Lastly, you are ready to **upload** the document. For each document object, you define its details, the file itself, and (optionally) other relationships.

- KDDMS provides the following document creation methods…

  - You can use the **New Document** utility to upload a **single** file and create document objects one at a time.
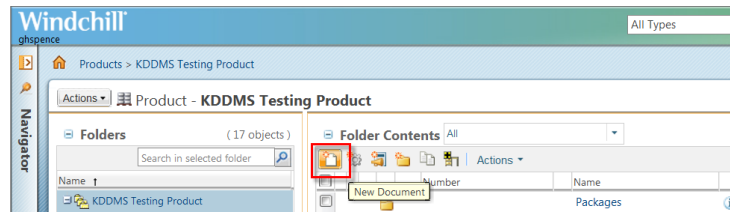
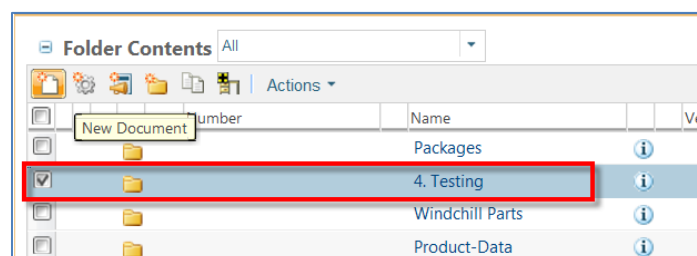- You can use the **New Multiple Documents** utility to upload **multiple** document objects.
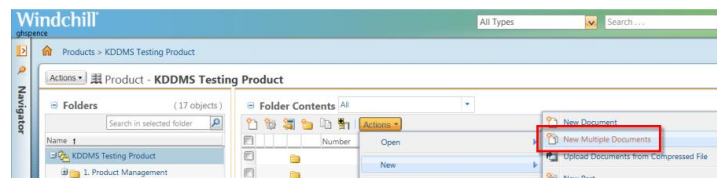
  - Alternately, you can create a **New Document** from a KDDMS Template. You can use the Template drop-down to create documents from predefined templates.
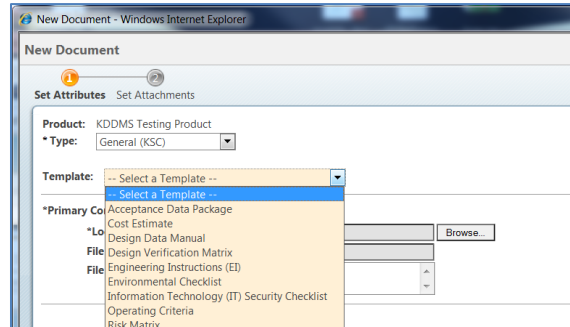
  - Before selecting the **New Document** or **New Multiple Documents** icon, you will want to apply a checkmark in the desired **Folder location**.

    - This checkmark identifies the desired folder location for the new document.

☞ If you forget to do so, you can still identify a location (or change it) in the New Documents Window **Attributes** section.
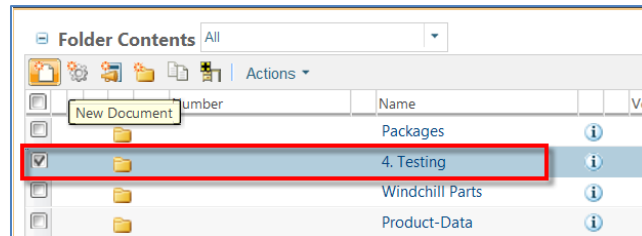
## *1.6.1.3 Creating a Single Office Document*

- Before you start the document creation process, you will want to put a checkmark in the desired Folder location.

  - You can start the document creation process by selecting the **New Document** icon in the Folders table of a Product…
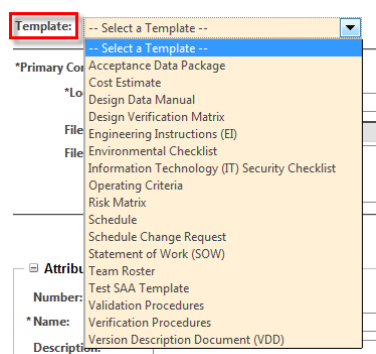

  - …or in a Folder's Actions menu.
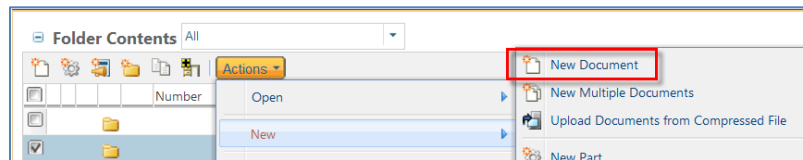
- This opens the New Document Wizard, which will step you through the document creation process.

  - Choose the desired (KSC) document **Type**…
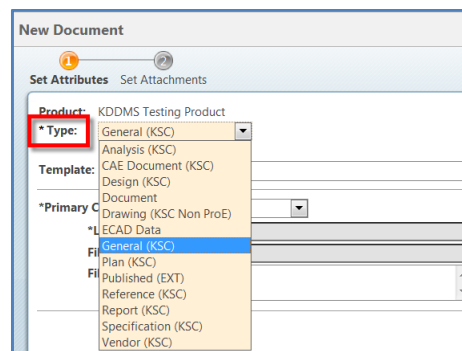
 - Choose an existing template or leave at the default (no template)…

- Choose the Primary Source Content…

☞ The Primary Content Source drop-down menu has four choices, of which we will primarily be using the **Local File** option…

☞ The **No Content** selection enables you to create a document object, initially without any primary content. Typically, a document object without content is used as a placeholder for which content is added at a later time.

☞ The selections **URL Link** and **External Storage** should not be used in the KDDMS system.

- The **Local File** selection enables you to select and upload a file from your computer. You can populate the **Local File Path** field by using the **Browse** button to browse to the file on your computer, or you can use the drag-and-drop icon to drag a file from your desktop to the New Document utility.

- The asterisk (∗) identifies the minimum fields required.

- If you haven't already chosen a Folder location for the document, you can do so now by choosing the **Set Location** item at the right-hand side of the **Select Folder** line…
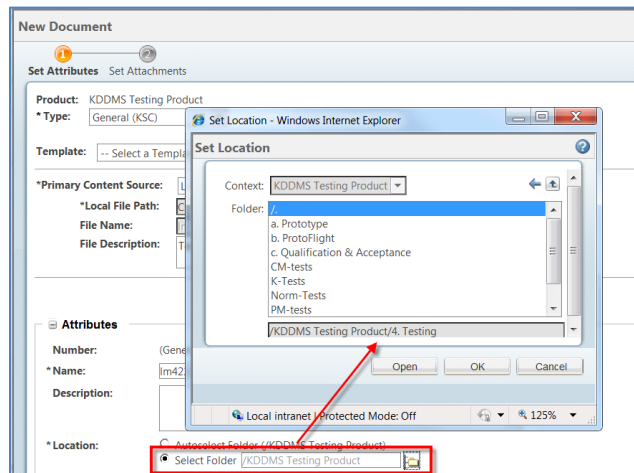
☞ Remember, we want all our documents to live within the folder structure — **not** at the Root level of the Product or Project.

- The final dialog enables you to specify the source of additional files that will be stored as attachments.

  - Attachments can be of three types — New Local File, New URL link and New External Storage.
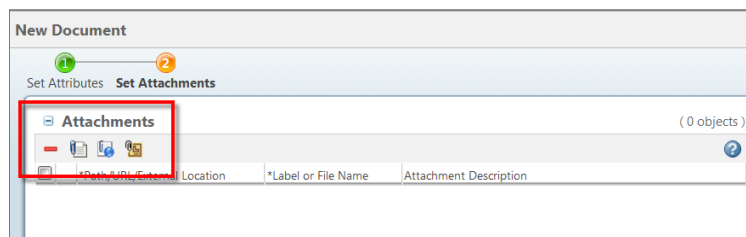

- Select Finish to complete the document's creation.

1.6.1.4 Creating Multiple Office Documents

- The **New Multiple Documents** utility enables you to upload multiple files as primary content and generate a document for each one.

    - Before you start the document creation process, you will want to put a checkmark in the desired Folder location.

- You can start the document creation process by selecting the **New Multiple Documents** from the Actions menu…
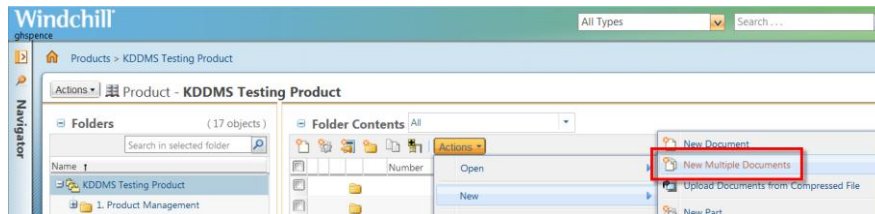
- This opens the New Document Wizard, which will step you through the multiple document creation process. Choose the desired (KSC) document **Type**…
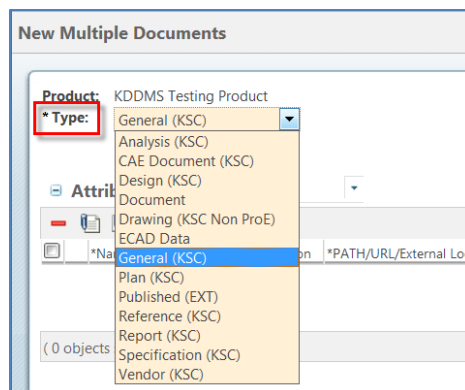
☞ It's important to note that when creating multiple documents, **all** of the documents are created as the same KSC Document Type chosen (i.e., General (KSC) in the illustration above.)

    - Next, you will need to specify the source of additional files that will be stored as attachments. Attachments can be of three types, as just noted earlier — we will focus on the *new local file attachment* option.
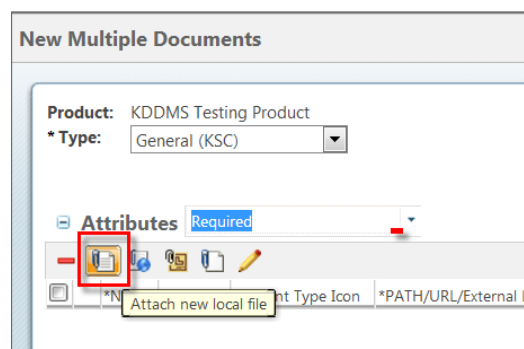
- Browse your computer and select the files to generate a document for each one. Verify (choose) the desired folder location…
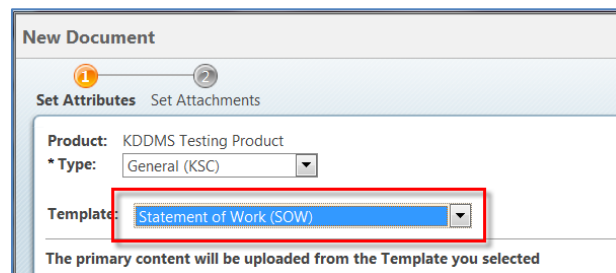
☞ There is no drag-n-drop for multiple document creation.
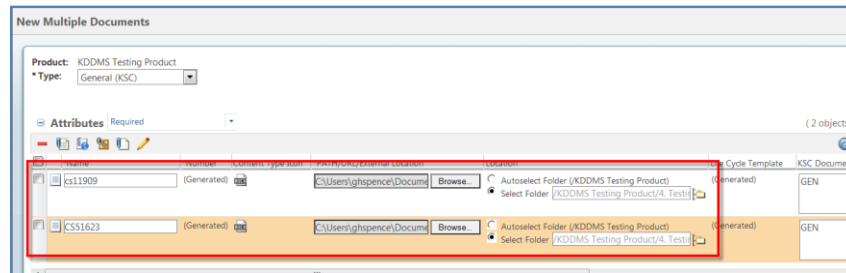
- Select OK to complete the multiple documents creation.

1.6.1.5   Creating a Document from Template

- The process for creating a Document from Template is the same as creating a New Document, with the additional step of choosing the desired template.

1.6.2 Checking-Out a Document

- To make changes to a KDDMS-managed document, we must **Check-Out** the document. This operation confirms your intent to modify it.

- We will cover the process of **Checking-Out** a document from KDDMS, make a **change** and then return it to KDDMS using the **Check-In** process.

- When a document is **Checked-Out**, two copies of the document exist.

   - The first, the *Working copy*, exists in a Working Location you designate — only you can see and modify this copy.

   - The *Original version*, the **Checked-Out** copy, remains available for everyone to view.
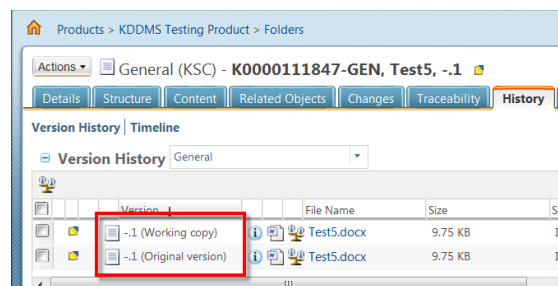
CHECK THE MASTER LIST - VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE
Approved for Public Release; Distribution is Unlimited

- To return the document to KDDMS, we must perform a **Check-In** (more on this later.)

☞ Although we are working with Office documents at the present, the above statements also apply to CAD Documents.

- There is more than one way to **Check-Out** a document from KDDMS — from the right-click drop-down menu, or the **i-ball** ⓘ (and then **Actions** from Details page.)
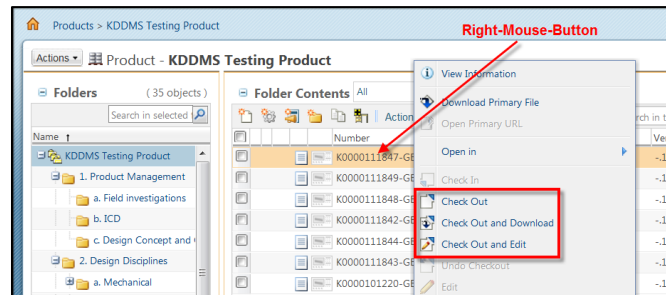
- The best way to do this is the **Check Out and Download** option…
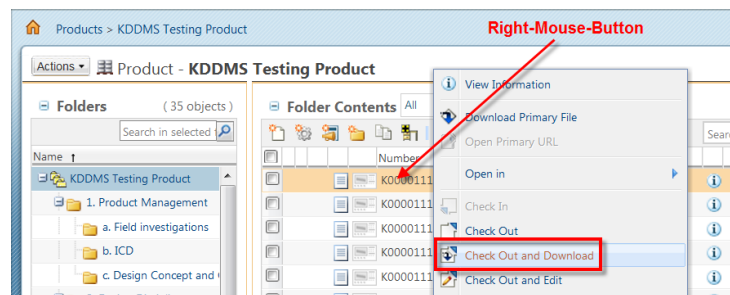
- After choosing **Check Out and Download**, KDDMS presents a File Download window, with the options to **Open** the document directly, **Save** the document to our computer, or **Cancel** the operation.
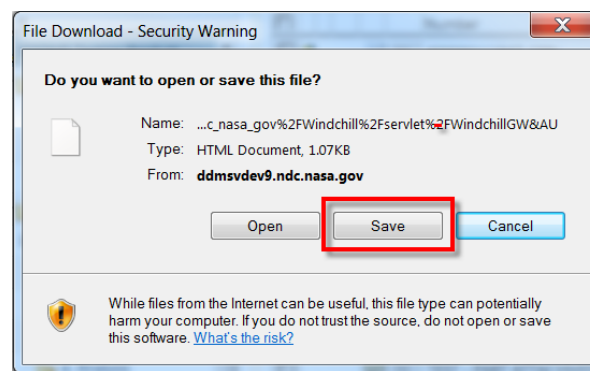
- If we choose **Open**, the document will be opened directly (in this case by MS Word) — however, KDDMS will put a copy of the document, on your computer, buried somewhere in your Profile in some Temp directory. Worse, the document will have a temporary name (i.e., 7AD1230C0F.tmp) — or something equally hard to identify.

- The recommendation is to **Save** the document to a location that **you** specify. The system will prompt for the **Save As** location and will confirm the download is complete.

☞ Having specified the location to **Save** the document, we will know where to find it later.

- Now that the document is **Checked-Out** and downloaded to your computer, if we look at the Folder view, we can see the document has a **Checked-Out** icon ▢ applied to it. We have now successfully **Checked-Out** our document and downloaded a copy of it on our local computer (in the location we have chosen)…
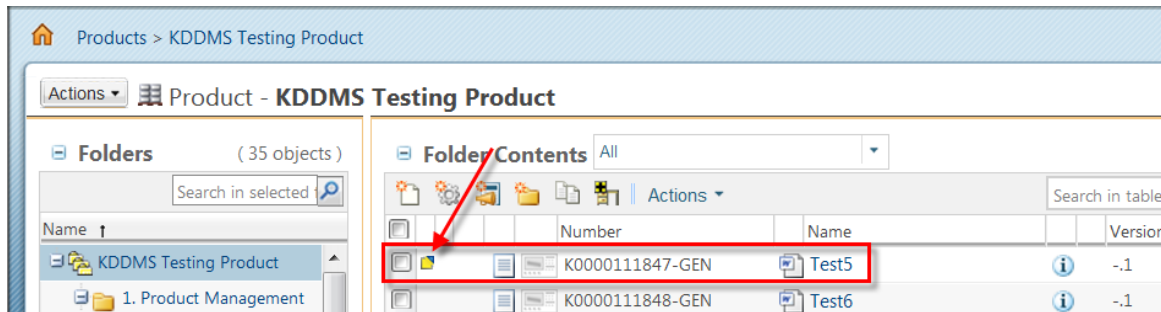
- We can now **Open** the *local* document and make the desired changes to it — when we're done, we'll need to return it to KDDMS by performing a **Check-In**, which we will look at soon enough.

- Before we perform a **Check-In**, we first need to look at a few other items pertaining to the **Check-Out** process.

1.6.2.1 Check-Out and Cancel

- What about the **Cancel** option during a **Check-Out**? What does it actually do, since after all, it's one of the options presented to us?

- When you initiate a **Check-Out**, the File Download window gives you the option to **Open**, or **Save**, the Document. The **Cancel** option is also available — unfortunately, if we select **Cancel**, what we're really cancelling is our choice of **Open** directly, or **Save** the Document.
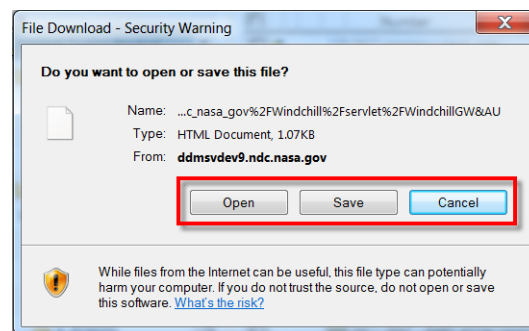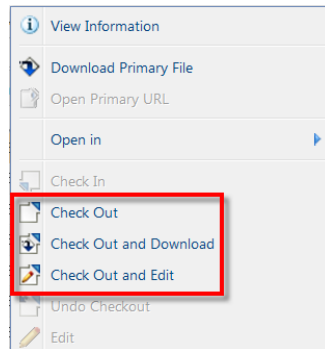
☞ You are cancelling the current operation, but what you are really telling KDDMS is; Yes, I want to **Check-Out** the document, but I don't want to **do** anything with it. (Not exactly what the sequence of events would imply.)

- Once we've chosen one of the Check-Out options...

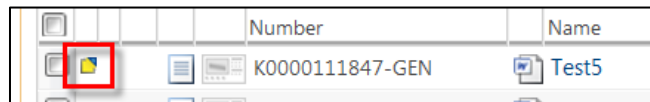- ...the document is **Checked-Out** — 🗋 — even if we <u>**Cancel**</u> the download, or otherwise do **nothing** with it...

☞ **Important** — If Canceling a **Check-Out** by **accident** is how you got here; see the *Undoing an Unintentional Check-Out* section that follows — otherwise continue below.

- As we've just seen, cancelling a **Check-Out** request isn't really what it seems — the document is **Checked-Out** anyway (we just don't **Download** it to our machine.)

- This can be used to our advantage, but it is important to understand the inherent risks...

  - Let's say we have a very large document **Checked-In**, and because of its size, it took a while to get it Uploaded — it is not unusual for a, say, 50+ megabyte document to take 10 minutes or so to get Uploaded on a day when KDDMS activity is high.

  - That being said, what if you need to make a change to your document, and don't want to wait through the long download — after all, you have the master document right there on your machine.

  - In this case, you could initiate a **Check-Out**, and then **Cancel** it — your document would indicate it is **Checked-Out** (so no-one else can Check it Out and modify it), and you could then make your changes and **Check-In** your updated master document.

☞ **Important —** If you do this, you must ensure you have the most up-to-date master document content. Because when you Upload your newly changed master document, you will be declaring it as the **Latest-and-Greatest**.

1.6.2.2 Undoing an Unintentional Check-Out

- What do we do when we **Check-Out** a Document — but we really didn't mean to?

  - The **Undo Checkout** function enables you to return an object to its prior state and status.
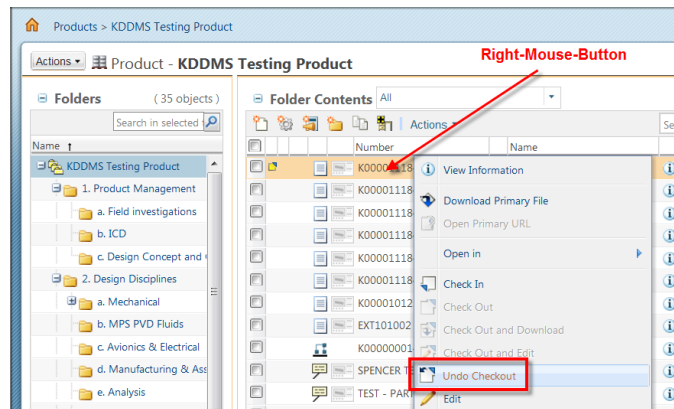

  - KDDMS **deletes** the working copy, which eliminates any changes to the working copy.

  - KDDMS returns the **Checked-Out** copy to its status before the **Check-Out**.

  - Prevents unnecessary Iterations from being generated.

☞ **Important** — What we **DO NOT** want to do is simply turn around and **Check-In** the document again. This will work, but it will also **create** a **new Iteration** of the document — not something we want to do if we can help it.

1.6.3 Checking-In a Document

- Once you have completed your changes to a **Checked-Out** document, you can upload it back into KDDMS by performing a **Check-In**.

- **Checking-In** a document allows you to share the document, and the changes you have made, with other KDDMS users.

  - **Checking-In** a document is pretty straight-forward — we've already seen much of the sequence when in the *Creating a Single Office Document* section. As before, we'll use our already **Checked-Out** MS Word document presentation, as seen here (note also the current Version & Iteration is **-.1**.)
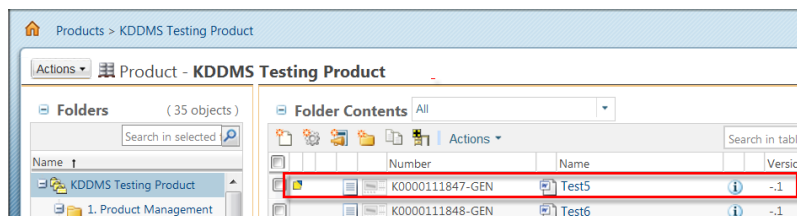

- There is more than one way to **Check-In** a document into KDDMS — from the right-click drop-down menu, or the **i-ball** ⓘ (and then **Actions** from Details page.)
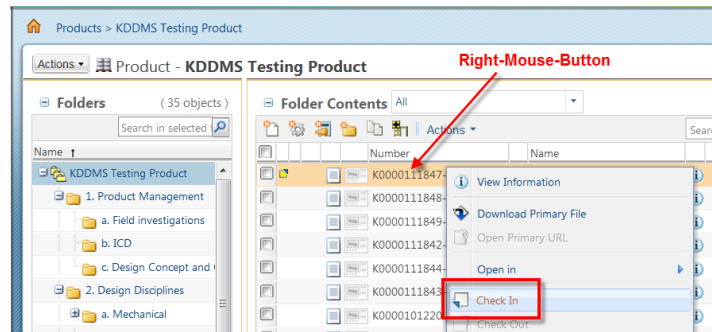
- From the **Check-In** dialog, there are few things needing our attention…

    - First, we need to choose either **Upload file:** and browse to the local file path of our document.

    - Second, we will want to add **Comments** — while this is "officially" optional, it should be considered standard practice. It makes looking at several Iterations of the document (like on the Details page) easier to understand. The Comments entered allow us to quickly see **what** was changed and **when**.
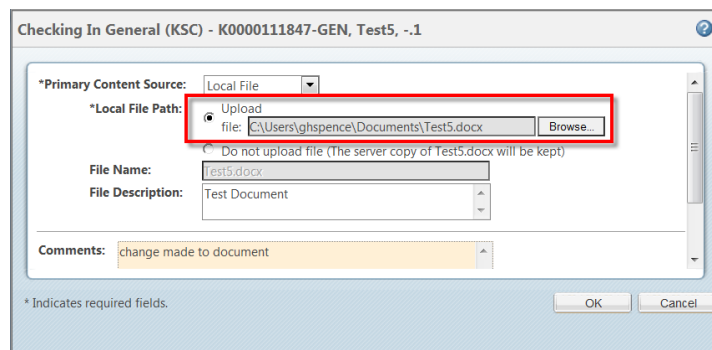
☞ **Important** — make sure you are uploading the correct document!

☞ Be descriptive with your comments — add **dates** and/or other **descriptive data** that will allow others to understand what the changes actually were.

    - Third, to proceed with the **Check-In**, you will choose **OK**.

    - When we look at the Folders view we see several changes — our document is **Checked-In** (no longer marked as **Checked-Out**), and the Iteration has changed (from **-.1** to **-.2**.) The Last Modified field shows the date/time of the modification.
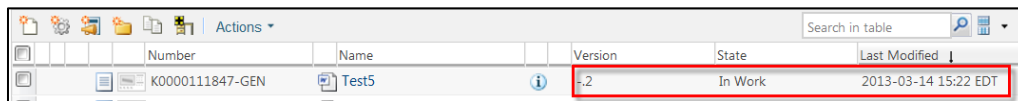
☞ We are just talking about Office Documents here — CAD Document processing will be covered in another document.

1.6.4 Setting a Document's State

- Documents are moved between States by the **Set State** Action, **Promotion Request**, or **Change Process** — we will focus here on the **Set State** action…

  - States are the same for Creo, Office and Product Structure documents.

  - The three States that can be employed are the **In-Work**, **Completed** and **Stored** States. Primarily, we will be employing the **In-Work** and **Completed** States.

  - The **only** State a document may be worked on (modified) is the **In-Work** State.

1.6.4.1 Set Lifecycle State

- KDDMS enables you to **manually** set the **lifecycle** state. You can only set the state of an object if you have Modify permissions for the object.

  - The **Set State** action enables users to move to other States in the KSC Lifecycle.

  - Multiple destination States provide a user with a choice of the state of an object is set to when performing the **Set State** transition.

  - A Lifecycle State represents a stage of development

  - Normal Processing States available — **In-Work/Completed/Stored**.

    - States can be set from **In-Work** to **Completed** or **Stored**.

    - States can be set back to **In-Work** from **Completed/Stored**.

    - **Only** the **In-Work** State allows the Document to be modified.

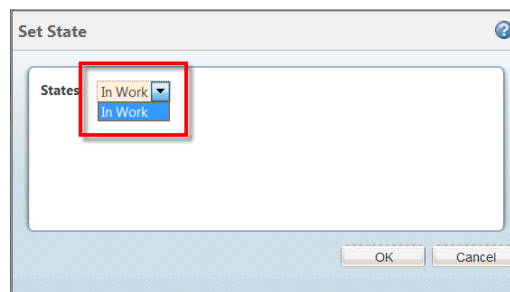 - The **Set State** action is available by a right-mouse-click on the document.
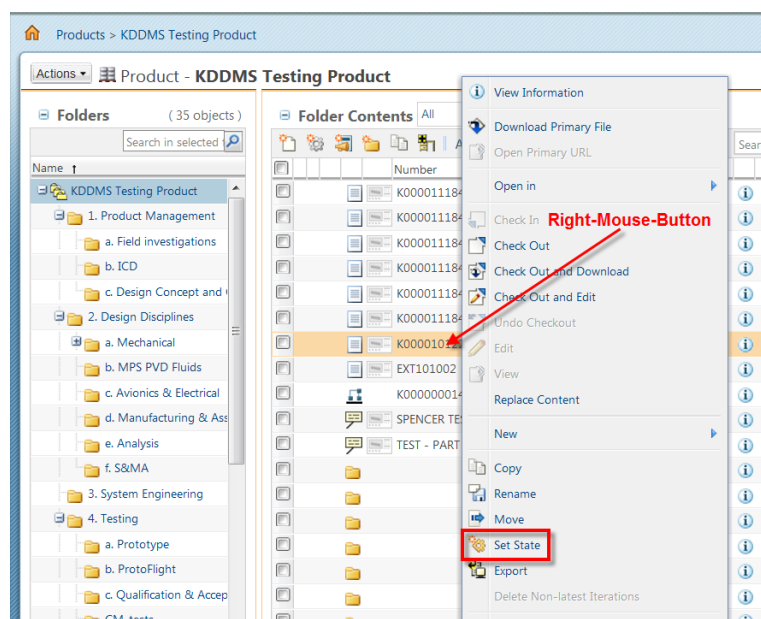
- Documents can be changed from the default **In-Work** State to either **Completed** or **Stored**.
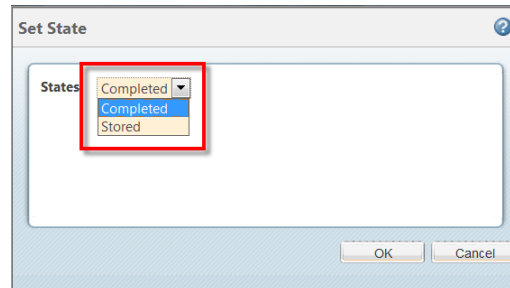
- **Completed** and **Stored** States can only be changed back to the **In-Work** state.
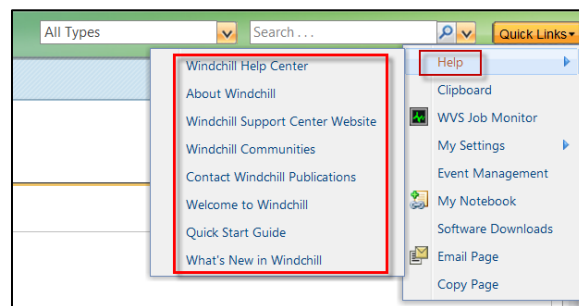
1.7 Getting Help with KDDMS

In this Section we will cover…

Available Help within KDDMS

KDDMS Info + Pubs Website

Getting Help for KDDMS

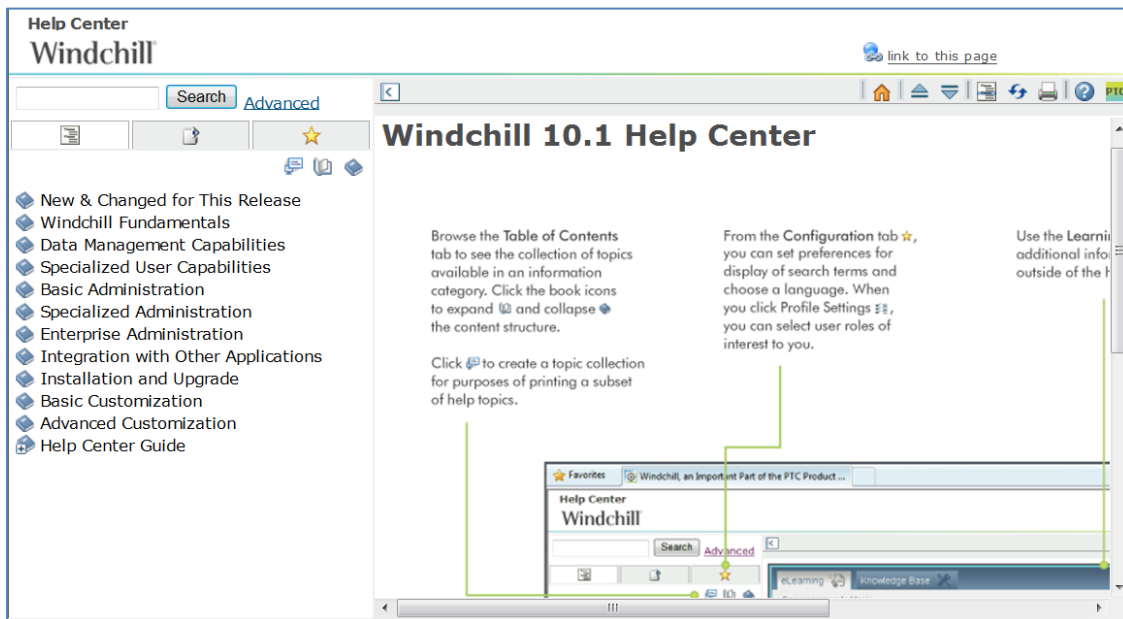- Help is available from the Quick Links ▾ > Help drop-down menu…

- and also from anywhere there is a Context Sensitive Help Icon

1.7.1 Available Help within KDDMS

- From the Quick Links menu, the Help option provides two important types of help for Windchill…

- The **Windchill Help Center** — online directory of help information.

- **Windchill Support Center Website** — link to the Windchill Support Center Web page at PTC.com.

  - Access to information in the Windchill Knowledge Base, Reference Documentation, and other Technical Support tools.

- Other Quick Links Help options —

  - **Windchill Communities** — opens a window to the PlanetPTC Windchill community web site, an online forum for PTC users.

  - **Contact Windchill Publications** — starts a draft E-mail addressed to the PTC Documentation Team.

  - **Welcome to Windchill** — provides guidance on how to use the Windchill user interface.

  - **Quick Start Guide** — downloads the Windchill Quick Start Guide (PDF) from PTC.com

  - **What's New in Windchill** — opens a window to the Enhancement Details page of PTC.com.

    - Provides information about the product enhancements available in Windchill 10.1.
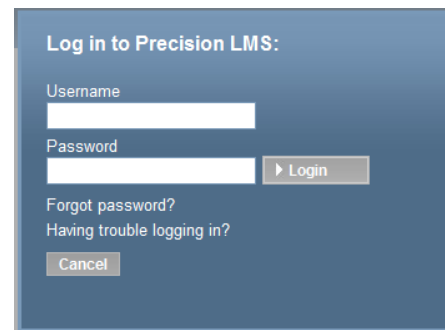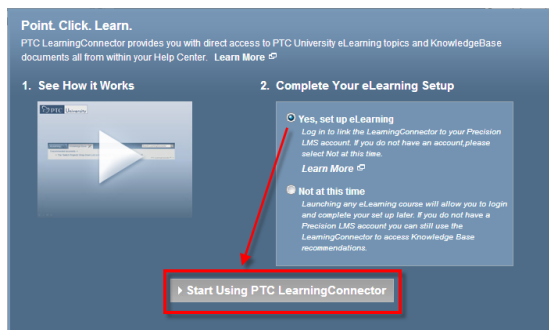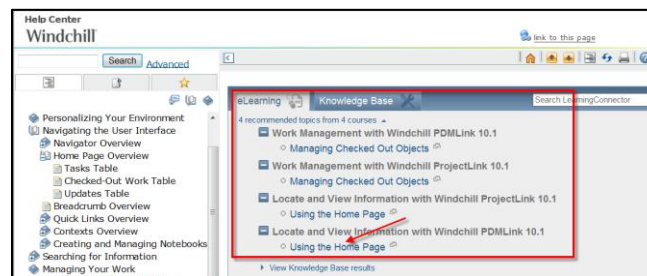
1.7.1.1 PTC Learning Connector

- PTC's **Learning Connector** provides links to web-based training (eLearning) about your topic of interest, from PTC University.

  - In many pages within KDDMS, you will see question mark symbols 🔵. Selecting these symbols launch the *Windchill Help Center* and navigate you to the information specific to the subject matter to where you selected the symbol.

- To activate the PTC Learning Connector, choose *Get Started* to begin the Learning Connector setup.
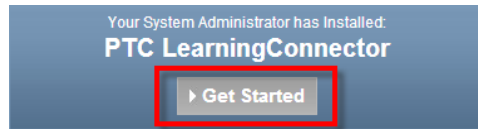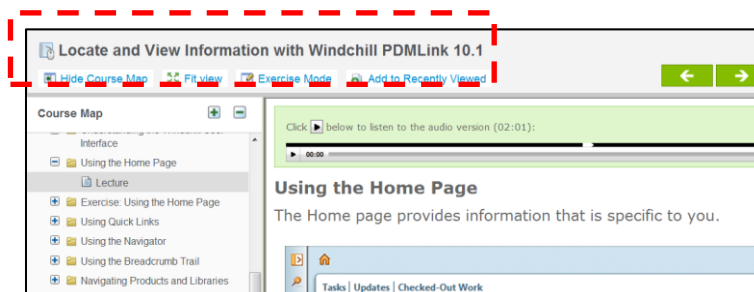

- You will be asked to login to your PTC University Precision LMS account.

  - Once you have logged in, the PTC Learning Connector will display the eLearning search results for the specific topic where you selected the 🔵 .

- Selecting an item from the search results will launch the specific module from the eLearning course.
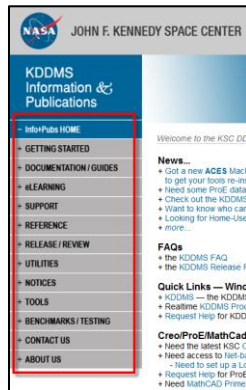
1.7.1.2 KSC KDDMS Information & Publications Website

- The KDDMS Information & Publications website (a.k.a. Info & Pubs) provides a central online resource for KSC specific material —

  - URL – **http://kscddms.ksc.nasa.gov/index.html**

☞ A quick link to the KDDMS Info & Pubs site can be found on the **KSC Internal Home Page**…
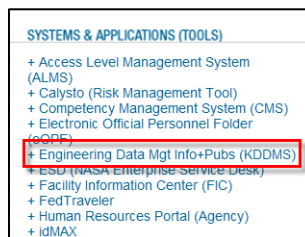
1.7.2 Getting Help for KDDMS

1.7.2.1 KDDMS User Support at KSC — Where do I go for help?

- The KSC Info & Pubs website also has a quick Link to this site.

- NE CAD/CAE CAD/CAE Sharepoint — CAD support repository for all CAD related content.

  - URL – **https://sp.ksc.nasa.gov/sites/cad/Resource/default.aspx**
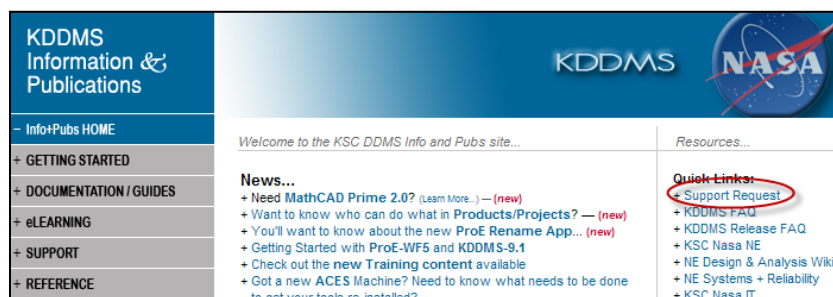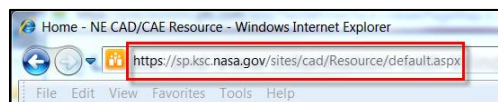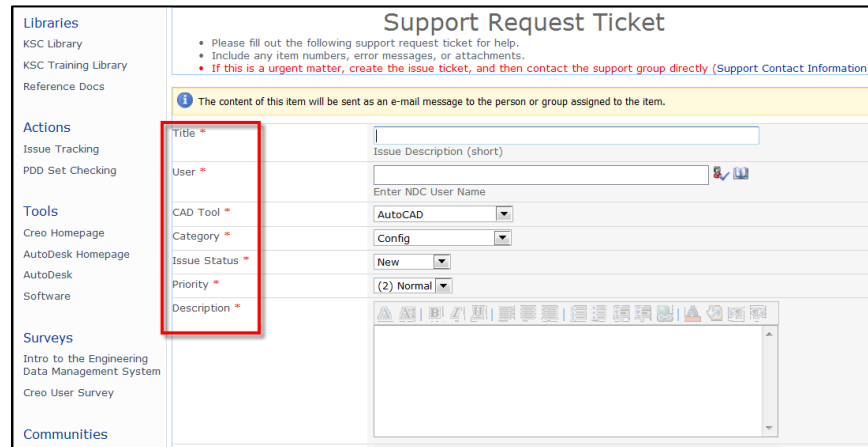
- From either link, select the New Support Request button [New Support Request] to initiate a support request…

☞ The asterisk (∗) identifies all required Support Request fields.

1.7.2.2 Reference eLearning (https://PrecisionLMS.PTC.com)

- Update to Windchill PDMLink 10.1 from Windchill PDMLink 9.0/9.1

- Introduction to Windchill PDMLink 10.1 for Heavy Users

- Introduction to Windchill PDMLink 10.1 for Light Users

- Windchill PDMLink 10.1 for Information Viewers

- Locate and View Information with Windchill PDMLink 10.1

- Product Structure Management with Windchill PDMLink 10.1

- Standard Document Management with Windchill PDMLink 10.1

- Visualization with Creo View Lite 2.0 for Windchill PDMLink 10.1

- Windchill PDMLink 10.1 for Creo Parametric Users

- Windchill PDMLink 10.1 for Information Viewers

- Windchill PDMLink 10.1 for Managers

- Windchill PDMLink 10.1 for Reviewers and Approvers

1.7.2.3 Reference PTC Documents

- Windchill 10.1 Quick Start Guide

1.8 Glossary of Terms

The definitions below are specific to KDDMS…

BOM (Bill of Material) — a listing of the quantity and type of objects that make up a Creo assembly.

Creo CAD Document (EPMDocument) — is used to store engineering design data such as drawings and models. It is a revision controlled; lifecycle managed item containing a CAD model.

Check-In — allows sharing of changes with other users, relinquishing exclusive modification privileges to specific objects in KDDMS.

Check-Out — allows exclusive modification privileges to a specific objects in KDDMS.

Context — a storage container. KDDMS is comprised of several individual Contexts.

Creo View — a data viewing and visualization tool in which you can view the files and properties related to the selected document, as well as create annotation of the data.

Document — object designed to store any electronic data. A document can stand alone or can be associated with other documents.

EPMDocuments — Creo CAD Documents

Iteration — mechanism to historically track updates to a document; each time you Check-In a modified item the system stores that item as a new iteration of the original.

Library — a KDDMS Library provides the context under which standard hardware and commonly used objects would be stored.

Lifecycle — this is the core capability to manage an item's maturity as well as access control policies for a set of roles in the system.

Product — a KDDMS Product provides the context under which a team of people can create and manage all of the information that is relevant to the design, manufacture, and support of a product.

Product Structure — a structured set of KDDMS objects that collectively define a product.

PTC Learning Connector — direct access to PTC University eLearning topics and knowledge based documents.

Thumbnail – reduced sized versions of images or pictures used to help recognize an item without opening it first.

Undo Check-Out – this removes your Check-Out lock on the set of items.

Version – displays the revision and iteration of the CAD document.

Windchill – a browser based large Product Lifecycle Management (PLM) system providing control of versioning, history, iteration and revisions.

Windchill Context – Product, Project, Library

Windchill Content – Documents, Creo CAD Documents, Product Structure Documents.

WTDocuments – Office Documents

WTParts – Product Structure Documents